



## RESPONSE TO ADVISORY ACTION

January 31, 2004

Petition to examiner Patricia L. Hailey

Pertaining to Telephonic interview date 18/12/2003, regarding patent application serial number 09/ 955,254, filed by Gene E. Lightner 09/17/2001. Response to Advisory Action is enclosed within.

Acknowledgment that the period for reply expires three months from the date of final rejection is noted.

The applicant amendment to specification, page 4, lines 18-19 is presented to establish the phrases "mutually insoluble phases" and a "solid sugar phase" These phrases, are applied to amended claim 1, without modification of purpose so as to maintain original scope and is only intended to clarify the original application. Accordingly, amendment to the specification, page 4, lines 18-19, sufficiently support claim 1, as currently amended. Amended claims are presented, to precede claims according to revised amendment practice, as required within 37 CFR 1.121.

The examiner is instructed to cancel claims 13-14, and claims 16-17 within the original claims as presented as (canceled).

For reference, amended claims, previously presented, are contributed below. Claim 1 is amended from claim 1 presented within the original application, so as maintain scope, provide consistency and thus avoid confusion. Claim 1, within the present invention, is amended to clarify the intention of this claim.

What is claimed is:

1. (amended): A method for separating sugars from a biomass hydrolyzed by an aqueous acidic solution which comprises:

providing a hydrolysis vessel for hydrolysis of a biomass, and

providing a supply of said biomass to said hydrolysis vessel, and

providing a supply of said aqueous acidic solution to said hydrolysis vessel, and

providing a phase forming vessel, and

subjecting said biomass, contained within said hydrolysis vessel, to hydrolysis by said aqueous acidic solution to form a hydrolysate containing sugars, and

withdrawing said hydrolysate from said hydrolysis vessel, and  
transferring said hydrolysate to said phase forming vessel to form two mutually insoluble phases; a  
solid sugar phase and an aqueous acidic solution phase, and  
separating ~~[said]~~ solid sugar from said phase forming vessel, and  
separating ~~said aqueous acidic solution phase, from said phase forming vessel,~~ for subsequent  
recycle to said hydrolysis vessel, and  
withdrawing residue, remaining from hydrolysis of said biomass, containing lignins, from the  
hydrolysis vessel, thereby hydrolysis of a biomass forms a hydrolysate containing sugars and  
substantially separating sugars [the] from the hydrolysate and withdrawing residue remaining from  
hydrolysis of the biomass from the hydrolysis vessel and the hydrolysate, with sugars substantially  
removed, [will] to provide recycled aqueous acidic solution to the hydrolysis vessel.

4. (amended) The method of claim 1 wherein said biomass is selected from the group [which  
~~include]~~ consisting of wood, paper and lignocellulose materials including an individual or a  
combination of these thereof.

5. (amended) The method of claim 1 wherein said sugars consist of the group [which include]  
consisting of glucose and pentose sugars including an individual or a combination thereof.

10. (amended) The method of claim [8] 9 wherein [said] the filtered residue is subjected to  
extraction by water to produce water extracted residue and an aqueous extractate.

11. (amended) The method of claim 1 wherein [said] sugars [is] are dissolved by an aqueous  
solution.

12. (amended) The method of claim [10] 11 wherein [said] the aqueous solution is supplied from  
a fermentation broth.

It is petitioned that, upon examination of the currently presented amended specification and  
claims and claim cancellations, remaining claims will be allowed and entered by the examiner.  
~~Revised amendment practice, as required within 37 CFR 1.121,~~ is presented in the for  
consideration.

Separate sheets of amended claim listing, are provided, and is petitioned to be entered.  
Very respectfully,



Gene E. Lightner